

REMARKS

The Office Action dated April 17, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-26 are currently pending in the application, of which claims 1-2, 9-10, and 17-26 are independent claims. Claims 1-22 have been amended and claims 23-26 have been added to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 1-26 are respectfully submitted for consideration.

Claims 1-10 and 19-20 were objected to because of various informalities. Claims 1-10 and 19-20 have been amended, and it is respectfully submitted that the various objections are moot in view of the amendments. It is, therefore, respectfully requested that the objections be withdrawn.

Claims 1-22 were rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/63851 of Raitola et al. ("Raitola"). Applicants respectfully submit that the claims recite subject matter that is neither disclosed nor suggested in Raitola.

Claim 1, upon which claims 3-4 depend, is directed to a data transmission method, including determining a number of bit rate classes. The data transmission method also includes setting minimum bit rates for the bit rate classes. The data transmission method further includes setting a general minimum bit rate. The data transmission method additionally includes setting a maximum transmission power target. The data transmission method also includes arranging resource requests into a queue. The data transmission method further includes allocating resources in a telecommunication system according to the

requests in the queue by using the minimum bit rates as bit rate allocation portions until the maximum transmission power target is achieved.

Claim 2, upon which claims 5-8 depend, is directed to a data transmission method including determining a number of bit rate classes. The data transmission method also includes setting minimum bit rates for the bit rate classes. The data transmission method further includes setting a general minimum bit rate. The data transmission method additionally includes setting a maximum transmission power target. The data transmission method also includes arranging resource requests into a queue. The data transmission method further includes allocating resources in a telecommunication system according to the requests in the queue by using the minimum bit rates as bit rate allocation portions. The data transmission method additionally includes, if the maximum transmission power target is not achieved when resources have been allocated to all users in the queue, increasing bit rates based on the queue until the maximum transmission power target is achieved. The data transmission method also includes, if the resource requests cause too much load in relation to the maximum transmission power target, decreasing the required number of bit rates in a predetermined way.

Claim 9 is directed to a radio network controller including a bit rate class determination unit configured to determine a number of bit rate classes. The radio network controller also includes a bit rate setter unit configured to set minimum bit rates for the bit rate classes. The radio network controller further includes a general bit rate setter unit configured to set a general minimum bit rate. The radio network controller additionally includes a maximum transmission power target setter unit configured to set a maximum

transmission power target. The radio network controller also includes a queue unit configured to arrange resource requests into a queue. The radio network controller further includes a resource allocation unit configured to allocate resources according to the requests in the queue by using the minimum bit rates as bit rate allocation portions until the maximum transmission power target is achieved.

Claim 10, upon which claims 11-16 depend, is directed to a radio network controller including a bit rate class determination unit configured to determine a number of bit rate classes. The radio network controller also includes a bit rate setter unit configured to set minimum bit rates for the bit rate classes. The radio network controller further includes a general bit rate setter unit configured to set a general minimum bit rate. The radio network controller additionally includes a maximum transmission power target setter unit configured to set a maximum transmission power target. The radio network controller also includes a queue unit configured to arrange resource requests into a queue. The radio network controller further includes a resource allocation unit configured to allocate resources according to the requests in the queue by using the minimum bit rates as bit rate allocation portions. The radio network controller additionally includes a bit rate increaser unit configured to increase bit rates based on the queue until the maximum transmission power target is achieved. The radio network controller also includes a bit rate decreaser unit configured to decrease the required number of bit rates in a predetermined way.

Claim 17 is directed to a base station including a resource arrangement unit configured to arrange resource requests into a queue. The base station also includes a

resource allocation unit configured to allocate resources according to the requests in the queue by using minimum bit rates as bit rate allocation portions.

Claim 18 is directed to a base station including a resource arrangement unit configured to arrange resource requests into a queue. The base station also includes a resource allocation unit configured to allocate resources according to the requests in the queue by using minimum bit rates as bit rate allocation portions. The base station further includes a bit rate increaser unit configured to increase bit rates based on the queue until a maximum target set for a transmission power is achieved. The base station additionally includes a bit rate decreaser unit configured to decrease a required number of bit rates in a predetermined way.

Claim 19 is directed to a radio network controller configured to determine a number of bit rate classes. The radio network controller is also configured to set minimum bit rates for the bit rate classes. The radio network controller is further configured to set a general minimum bit rate. The radio network controller is additionally configured to set a maximum transmission power target. The radio network controller is also configured to arrange resource requests into a queue. The radio network controller is further configured to allocate resources according to the requests in the queue by using the minimum bit rates as bit rate allocation portions until the maximum transmission power target is achieved.

Claim 20 is directed to a radio network controller configured to determine a number of bit rate classes. The radio network controller is also configured to set minimum bit rates for the bit rate classes. The radio network controller is further configured to set a general minimum bit rate. The radio network controller is additionally configured to set a maximum

transmission power target. The radio network controller is also configured to arrange resource requests into a queue. The radio network controller is further configured to allocate resources according to the requests in the queue by using the minimum bit rates as bit rate allocation portions. The radio network controller is additionally configured to increase bit rates based on the queue until the maximum transmission power target is achieved. The radio network controller is also configured to decrease the required number of bit rates in a predetermined way.

Claim 21 is directed to a base station configured to arrange resource requests into a queue. The base station is also configured to allocate resources according to the requests in the queue by using minimum bit rates as bit rate allocation portions.

Claim 22 is directed to a base station configured to arrange resource requests into a queue. The base station is also configured to allocate resources according to the requests in the queue by using minimum bit rates as bit rate allocation portions. The base station is further configured to increase bit rates based on the queue until a maximum target set for a transmission power is achieved. The base station is additionally configured to decrease a required number of bit rates in a predetermined way.

Applicants respectfully submit that Raitola fails to disclose or suggest all of the features of any of the presently pending claims.

Raitola generally relates to capacity allocation for packet data headers. At page 9, lines 9-20 Raitola indicates that bit rate allocation is initiated by a bit rate request that the packet scheduler (PS) receives from a mobile station or a base station. The packet scheduler allocates resources based on parameters, such as a requested bit rate, system load, and

estimated load change. The packet scheduler may allocate the requested bit rate, a smaller bit rate, may deny the request, or may postpone the allocation.

As explained at page 10, lines 10-12, the packet scheduler of Raitola may have a target power that it tries to reach. However, Raitola permits the target to be occasionally exceeded.

As explained at page 11, lines 31-34, in Raitola, if the PS is not able to allocate capacity for every bearer that requests capacity, the unscheduled capacity requests remain in the respective queues. As further explained at column 12, lines 8-10, the bearer bit rate can be modified by the PS during a packet switched connection. Moreover, as explained at page 13, lines 14-22, Raitola indicates that different timing periods for allocation and modification may reduce the signaling and load at the radio network controller (RNC). In particular, Raitola indicates that because modification takes more signaling resources and load than allocation, allocation should be performed more frequently than modification.

At page 20, lines 18-32, Raitola indicates that the selection of bearers whose bit rates are to be decreased can be done randomly. However, Raitola provides several priorities or rules that can be taken into account. Raitola provides a specific example of decreasing the bit rates of lower priority class bearers in random order, then higher priority class bearers in random order, then switching lower priority class bearers from a dedicated transport channel (DCH) to a CCH in random order, and finally switching higher priority class bearers from DCH to CCH in random order.

Claims 1-2, 9-10, and 17-22, however each recite: "allocat[ing] resources ... according to the requests in the queue by using [the] minimum bit rates as bit rate allocation

portions.” Applicants respectfully submit that Raitola does not disclose or suggest at least this feature.

As illustrated above, Raitola contains no discussion that minimum bit rates would be used as bit rate allocation portions in bit rate allocation. Accordingly, because Raitola does not disclose or suggest at least this feature, it is respectfully submitted that Raitola does not disclose or suggest all of the features of any of claims 1-2, 9-10, and 17-22.


Claims 3-8 and 11-16 depend from claims 1-2 and 10 and recite additional limitations. It is, therefore, respectfully submitted that claims 3-8 and 11-16 recites subject matter that is neither disclosed nor suggested by Raitola. It is, thus, respectfully requested that the rejection of claims 1-22 be withdrawn.

For the reasons explained above, it is respectfully submitted that each of claims 1-26 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-26 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants’ undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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Enclosures: Additional Claim Fee Transmittal
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